XPERT-PRO

ELECTRICAL POWER METER

- Compact 96X96X55 mm.
- Graphical Display 128X64
- Accuracy: Class 1.0 & Class 0.5 (Optionally).
- Odd Harmonics up to 15th of individual Voltage and Current Waveform including THD.
- RS-485 port for communication with EMS/PLS/SCADA with RX/TX dual color led indication.
- Two Relays-individually programmable for Alarm/Trip with led indication.
- Histogram & Tabular display of Harmonics content.
- Wave shape display for all voltage & currents.
- KWh Energy Pulse output on the LED (1000 impulses/KWh)

The electrical power meter, XPERT-PRO is a micro-controller based unit which measures various electrical parameters, and sequentially displays on a 128X64 backlit LCD.

The unit measures the three phase voltages, currents, frequency, power factors, individual Harmonic data as Histogram including Total Harmonic Distortion as well as individual current and voltage waveforms for all three phases.

The unit is fully solid state and will give years of trouble-free service once installed correctly.

Comprehensive Measurement

- All readings are True RMS measurements.
- Measurement of three energies: KWh, KVAh, KVARh
- Odd Harmonics upto 15th of individual Voltage and Current Waveform including THD.
- KVA and KW Demand

Installation and Connections

- Single Model Accepts 3P4W, 3P3W and 1P2W connections
- 1A and 5A CT secondary selectable
- User selectable CT and PT Ratio.

Communication

XPERT-PRO has a communication port, RS485 for connection to SCADA/EMS.

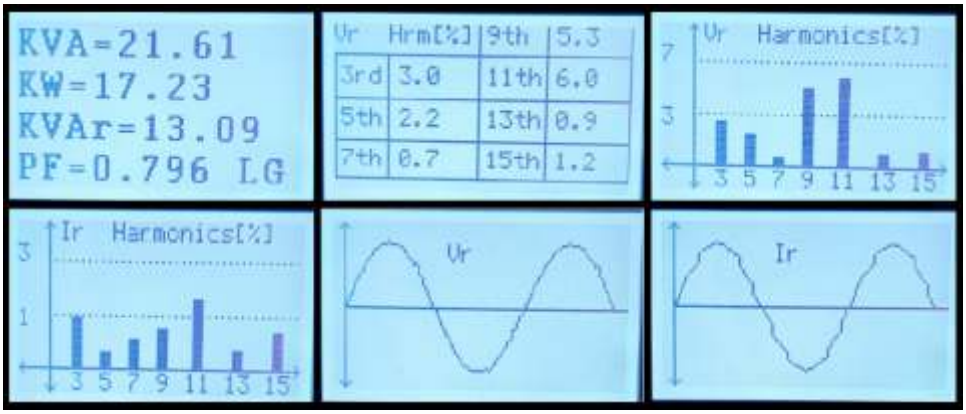
Control

The unit has two relay contacts which are programmable to operate for Alarm/Trip functions with the following parameters including (Sliding) Demand powers (KW and KVA).

Sr No.	Alarm Parameters	Relays Switches on at	Relay Switches off at	Settable Time Delay
1.	Avg. Volts	>Set value	<95% of set value	005 to 180 sec
2.	Avg. Amps.	>Set value	<95% of set value	005 to 180 sec
3.	KVA	>Set value	<95% of set value	005 to 180 sec
4.	KW	>Set value	<95% of set value	005 to 180 sec
5.	KVAR	>Set value	<95% of set value	005 to 180 sec
6.	Demands	>Set value	<95% of set value	2 sec.(fixed)
7.	PF	<Set value	>Set value	005 to 180 sec.

Other features

Graphical LC display of 128X64 monochrome (Black and white) makes it possible to display harmonic data in histogram waveforms of all voltage and currents.



Technical Specifications

Parameter			
Type		Name	Statistics
INPUT		Supply	Three Phases and Neutral of a 3P4W system / Three Phases of a 3P3W system & Phase and Neutral of a 1P2W system
		Voltage	Direct Voltage Input : Up to 500V L-L, Up to 300V L-N PT Ratio : Site Selectable Burden : 0.5VA
		Current	Secondary Current Input: 5A or 1A (Site Selectable) CT Ratio : Site Selectable Range of Reading : 5 – 5000A Burden : < 1.0VA Overload : 5A CT = 6A RMS Continuous 1A CT = 1.2A RMS Continuous
		Power Supply	Auxiliary Supply : 80 - 270 VAC, 50-60 Hz.
OUTPUT		Relay	Two. Individually Field Programmable. 3A @ 230 VAC, Resistive Load
MEASUREMENT	True RMS Basic Parameters	Voltage (Volts L-N & L-L)	VL-N - Accuracy : 0.5% of Reading VL-L - Accuracy : 1.0% of Reading
		Current (Amps IR, IY, IB)	Accuracy : 0.25% of Reading
		Line Frequency	45 to 65 Hz, Accuracy : 0.3% of Reading
	Power	Active Power (P)	Accuracy: 1% of Reading (For IPFI>0.5)
		Reactive Power (Q)	Accuracy: 1.5% of Reading (Between 0.5 Lag to 0.8 Lead)
		Apparent Power (S)	Accuracy: 1%% of Reading
		Power Factor	For Individual phases and System Accuracy: 1.0% of Reading (I*PF*I≥0.5) Range of Reading: 0.05 to 1.00 Lag/Lead
	Energy	Total Active Energy (KWh)	Range of Reading: 0 to 9999999.9 Accuracy: 1.0S as per IS13779
		Total Apparent Energy (KVAh)	Range of Reading: 0 to 9999999.9 Accuracy: 1.0% of Reading
		Total Reactive Energy (KVARh)	Range of Reading: 0 to 9999999.9 Accuracy: 1.5% of Reading
	Power Quality	Individual waveform for each voltage and current	
		THD for each voltage and current	
	Demand	KVA/ KWA Demand	Site Selectable. Demand Interval 15/30 Min. Also site selectable
		Max. Demand	Max. Value reached only. No time & date stamp
MISCELLANEOUS	Dimensions	Bezel	96 X 96 mm
		Panel Cutout	92 X 92 mm
		Depth of installation	55 mm
		Display	128X64 LCD
		Operating temp	10°C to 50°C
		Weight	0.35 Kgs (Approx.)
		Min. Operating Current	0.4% to 120% of CT primary
	Comm.	RS485	Modbus-RTU protocol
		Calibration LED.	Red color. 1000 impulses/unit(basic) for KWh
		Communication LED	Dual color LED. Data Receive - Green LED. Data Transmit - Red LED.
		Relay LED	2 Red Color for Relay ON Indication.

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*Specifications are subject to change without notice due to continuous improvement.